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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/422,775	10/21/1999	CHARLES ALBIN HANSON	04MV1089	5982

34225 7590 10/10/2003
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EXAMINER

VO, LILIAN

ART UNIT PAPER NUMBER

2127

DATE MAILED: 10/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/422,775

Applicant(s)

HANSON ET AL.

Examiner

Lilian Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19, 25 - 29 and 34 - 38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19, 25-29 and 34-38 is/are rejected.
- 7) ☒ Claim(s) 38 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 19, 25 – 29, and 34 – 38 are presented for examination. Claims 20 – 24, 30 – 33, 39 – 43 have been withdrawn from further consideration.

Response to Arguments

2. Applicant's arguments filed 7/23/03 have been fully considered but they are not persuasive for the reasons set forth below.

As per applicants' remarks, page 4, lines 1 – 3, in which there is no disclosure in Madnick that the heterogeneous data be treated as 'a single data source object', the examiner disagrees. Madnick discloses the step of retrieving data from at least one of the heterogeneous data sources and translating retrieved data from the data context associated with the heterogeneous data sources into the data context associated with the request (col. 17, lines 35 – 39 and col. 7, lines 35 – 44). In other words, all of the retrieved data is being treated as a single data source after the step of translating in a form to satisfy the request.

As per applicants' remarks, page 4, lines 3 – 5, in which Madnick's reference does not disclose the request contain "at least a first method to be performed on the data source object and at least a second method to be performed on the results produced by performance of the first method", the examiner disagrees. Madnick discloses the step of translating the request, retrieving data from the databases and the retrieved data is translated to provide the user with a complete response (col. 2, lines 44 – 60, col. 15, lines 24 – 39 and col. 17, lines 19 – 39). A

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query (a request) may be broken into multiple sub-queries to access different databases and the separate results are returned to join by the wrapper generator (col. 15, lines 24 – 39).

As per applicants' remarks, page 4, lines 8 – 13, in which Madnick's reference does not disclose "making a determination as to whether said second method should be performed on said results at each respective node or should be performed at the user site after said results are transmitted from each node back to the user site", the examiner disagrees. Madnick shows the query results must be translated into the correct units before being presented to the data receiver (col. 9, lines 15 – 18) or may be done by the request translator or it may be done by the data receiver itself (col. 9, lines 19 – 24).

As per applicants' remarks, page 4, 3rd paragraph, in which Madnick's reference does not disclose "each of said new requests including code representing said first method and second methods", the Office would like to point out that col. 9, lines 24 – 44 and col. 15, lines 24 – 39, both show a query is divided into sub-queries where each is being processed to obtain the desired information based on the original request to provide the user with a complete response to the query. Hence, all new sub-queries must also included code relating to the previous queries in order to reference back to the original query.

As per applicants' remarks, pages 4, 4th paragraph, note the discussion above regarding the first and second methods.

Regarding applicants' remarks, page 4, 5th paragraph, Madnick's reference discloses the data source is being translated from the data context of the data source into the data context associated with initial request before present to the data receiver (col. 2, lines 44 – 60 and col. 9,

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lines 4 – 24). Hence, this inherently shows the data receiver determined that the translation step should be performed at the node.

Regarding applicants' remarks, page 5, 1st paragraph, Madnick's reference discloses the wrapper generator generates a table with the requested data and transmits the table to the request translator via the data translator to be joined with data from other sources (col. 15, lines 11 – 22). Hence, data must have been stored before the table can be generated to transmit back to the request translator.

Regarding applicants' remarks, page 5, 2nd paragraph, Madnick's reference col. 15, lines 11 – 23 discloses the data to be joined perform at the request translator (agent process) and then transmit the complete response back to the data receiver (fig. 6, 102). Madnick discloses of the "third method" as the step of transmitting the data back to the user.

Regarding claim 11, although presumed by the Office, for the purpose of examination, that the limitation "said format" in claim 11, is in the same script format as the request. "said format" in this claim lacks antecedent basis. Applicants need to make an appropriate correction. In view of applicants' remarks, page 5, 3rd paragraph, Madnick discloses the query or sub-queries (requests) from user could be in a form of SQL (structured query language), another form of a script. Furthermore, SQL has been considered well known in the art as a scripting language.

Regarding applicants' remarks, page 5, 4th paragraph, Madnick discloses agent process such as request translator and wrapper generator perform operations comprising commands which have been converted from the query itself (and sub-queries) to interact with data source (col. 2, lines 44 – 60, col. 9, lines 4 – 44 and col. 15, lines 11 – 39).

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Regarding applicants' remarks, page 5, last paragraph, regarding claim 15, note the rejection in view of Nierenberg for this claim below.

Regarding applicants' remarks, page 6, 1st and 2nd paragraphs, Madnick discloses each data source has a descriptor file which "contains information about the registered data source 104, including an export schema which defines what data elements are available from the source, a specification file which describes the actions needed to be performed in order to retrieve data values from the site... the descriptor file may contain an indication of the capabilities of the source... The descriptor file 702 can contain actual data or, as shown in FIG. 7, the descriptor file 702 may be a directory of URL addresses which locate necessary information about the data source 104" (col. 10, lines 15 – 30). Hence, Madnick discloses metadata of the data source contain at each node for use by agent process such as request translator and wrapper generator.

In response to applicants' argument (page 6, last paragraph – page 7, 1st paragraph) that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, combining Dustan's teaching with Madnick's teaching to provide the system with a variety of different form of scripts beside SQL. Furthermore, Java script can interact with HTML source code, and enabling Web authors to spice up their sites with dynamic content.

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In response to applicants' remarks, page 7, 2nd paragraph, regarding claim 18, Nierenberg's prior art, col. 10, lines 32 – 55 discloses a collection of data source objects (objects 142 and 144) which reflect data stored in database as a single object (object 142 and 144 are sequentially linked to one another) and each of data source object is broken down into successive class levels (fig. 4, 148, 150 – 154, and see also fig. 13).

Regarding applicants' remarks, page 7, 2nd paragraph, claim 19, Nierenberg's prior art discloses class level include a class comprising a system node (fig. 13), system server (fig. 13, database classes), data source object (fig. 4, 142 and fig. 13, 496), field Desc (col. 3, lines 7 – 27, fig. 2B and fig. 13: 486, 492), and system script (col. 17, lines 35 – 42 and fig. 13).

Allowable Subject Matter

3. The indicated allowability of claims 8 and 38 are withdrawn in view of the newly discovered reference(s) to Brezin et al and Yong et al. Rejections based on the newly cited reference(s) follow.

Claim Objections

4. **Claim 38** is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form. For the purpose of examination, the Office will assume it is depending on claim 37.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 11 – 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites the limitation “said format” on line 2, page 76. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1 – 7, 9 – 11, 13, 14, 16, 17, 25 – 29, 34 – 37 are rejected under 35 U.S.C. 102(e) as being anticipated by Madnick et al (US Pat 5,913,214).

Regarding **claim 1**, Madnick et al. disclose a method of accessing and operating upon heterogeneous data at a plurality of nodes comprising the steps of:

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(1) propounding a request containing a data source object name wherein the heterogeneous data is treated as a single data source object (col. 2, lines 57 – 60, col. 7, lines 35 – 44, col. 17, lines 35 – 39 and figs. 3 and 4), said request further containing at least a first method to be performed on the data source object and at least a second method to be performed on the results produced by performance of the first method (col. 9, lines 4 – 23, col. 10, lines 1 – 5, col. 15, lines 24 – 39, and col. 17, lines 20 – 39);

(2) determining whether the data source object is distributed across a plurality of nodes (abstract, col. 2, lines 55-57, col. 17, lines 19 – 20); and

(3) making a determination as to whether said second method should be performed on said results at each respective node or should be performed at the user site after said results are transmitted from each node back to the user site (col. 2, lines 45 – 57, col. 9, lines 4 – 24, and col. 15, lines 24 – 39).

Regarding **claim 2**, Madnick et al. disclose the method of claim 1 wherein, if it is determined that the data source object is distributed, and said second method should be performed at the respective nodes, the request is broken into a plurality of new requests, each of said new requests including code representing said first and second methods and having a format appropriate to one of the respective nodes where the data source object resides (col. 9, line 4 – col. 10, line 5, and col. 15, lines 11 – 39).

Regarding **claim 3**, Madnick et al. further disclose the method of claim 2 comprising the steps of:

transmitting said new requests to said nodes (col. 15, lines 24 – 35);

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executing the first method concurrently on the data source object at the corresponding nodes (fig. 4 and 6, col. 13, lines 5 – 30);

temporarily storing the results of execution of the first method (col. 15, lines 24 – 39 -- this step is inherent since the results must be temporary stored before it can be returned to the wrapper generator) ; and

executing the second method on said results, said step of executing being performed at each of said nodes where the data source object resides (col. 9, lines 4 – 23, col. 10, lines 1 – 5, col. 15, lines 24 – 39, and col. 17, lines 20 - 39).

Regarding **claim 4**, Madnick et al. disclose the method of claim 1 wherein a first agent process at the user site performs the step of making a determination as to whether the second method should be performed at each respective node (col. 9, lines 4 –24, col. 17, lines 19 – 45, col. 2, lines 44 – 60, col. 15, lines 24 – 30).

Regarding **claim 5**, Madnick et al. disclose the method of claim 4 wherein, in performing the step of determining whether the data source object is distributed, the first agent process consults a data source descriptor file containing a subset of data contained in a first repository of metadata (col. 10, lines 10 – 35).

Regarding **claim 6**, Madnick et al. disclose the method of claim 5 wherein a remote agent process automatically executes said first method, automatically stores the results produced by executing said first method, and automatically executes said second method on said results (col. 15, lines 11 – 39).

Regarding **claim 7**, Madnick et al. disclose the method of claim 6 wherein the results of execution of said second method are automatically returned to a the user site and, automatically

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merged by said first agent process, and wherein a third method is then automatically executed on the merged results by said first agent process (col. 9, line 4 – col. 10, line 5).

Regarding **claim 9**, Madnick et al. disclose the method of claim 5 wherein the data source descriptor file is created from 2 the repository at run-time (col. 10, lines 15 – 20).

Regarding **claim 10**, Madnick et al. disclose the method of claim 4 wherein a first messenger process cooperates with said first agent process to transmit each said new request to its respective node (col. 2, lines 45 – 57, and col. 15, lines 25 – 30).

Regarding **claim 11**, Madnick et al. disclose the method of claim 10 wherein said request is in the form of a script and each said new request is in the form of a script having said format (col. 5, lines 13 – 19, col. 10, lines 11 – 13, and col. 15, lines 25 – 30).

Regarding **claim 13**, Madnick et al. disclose the method of claim 11 wherein each of said nodes has associated therewith a respective database, and a respective agent process, each respective agent process comprising code selected to execute the respective new script with respect to the data source object as it is contained in the respective database (col. 13, lines 40 – 45).

Regarding **claim 14**, Madnick et al. disclose the method of claim 13 wherein each of said databases is different from the remaining respective databases (col. 15, lines 24 – 40).

Regarding **claim 16**, Madnick et al. disclose the method of claim 13 wherein each respective agent process accesses metadata located at the respective node in the course of executing the respective new script at that node (figs. 5 and 7, and col. 10, lines 15 – 30).

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Regarding **claim 17**, Madnick et al. disclose the method of claim 16 wherein a data source descriptor file is created from the metadata at each respective node for use by the respective agent process (figs. 5 and 7, and col. 10, lines 15 – 30).

Claims 25, 29, and 34 are rejected on the same ground as the discussion of claim 1 above.

Claims 26 and 35 are rejected on the same ground as the discussion of claims 1 and 2 above.

Claims 27, 28, 36, and 37 are rejected on the same ground as the discussion of claims 6 and 7 above.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 8 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Madnick et al (US Pat 5,913,214, hereafter referred to Madnick) in view of Brezin et al (US Pat Application Publication 2002/0178161 A1, hereafter referred to Brezin) and further in view of Yong et al (US Pat 5,749,079, hereafter referred to Yong).

Regarding **claims 8 and 38**, although Madnick discloses of the first, second and third methods, which include the search of the data object and transmit the result back to the user as

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recited in claims 7 and 37 respectively, he did not clearly teach of the steps sorting the results of the search and sending the result of the search through email. Nevertheless, the feature of sorting the search result can be found in Brezin's prior art (paragraph 0030) and the feature of emailing the search result back to the user can be found in Yong's prior art (col. 32, lines 30 – 61).

Therefore, it would have been obvious for one of ordinary skill in the art, at the time the invention was made, to incorporate the sorting of the search result and the emailing of the search result features from Brezin and Yong respectively to Madnick's invention to enhance the performance of the system with more processing capabilities.

11. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Madnick et al (US Pat 5,913,214) in view of Dustan et al (US 5,884,312).

Regarding **claim 12**, Madnick et al. disclose the method of claim 11 except wherein said script and said new scripts are each in the form of a Java script. Nevertheless, Dustan et al teach of the use of Java script in col. 11, lines 25 – 30. Therefore, it would have been obvious for one ordinary skill in the art, at the time the invention was made to implement Madnick et al's invention with Dustan et al's teaching of Java script to provide the system with a variety of different form of scripts. Furthermore, Java script can interact with HTML source code, and enabling Web authors to spice up their sites with dynamic content.

12. Claims 15, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Madnick et al (US Pat 5,913,214) in view of Nierenberg et al (US 5,664,182).

Regarding **claim 15**, Madnick et al. disclose the method of claim 14 except wherein the respective databases comprise at least two databases, each selected from the following group: Oracle database, NT database and SQL Server. Nevertheless, Nierenberg et al. disclose in fig. 13, the connection to databases such as SQL and Oracle server (514 and 518). Therefore, it would have been obvious for one of ordinary skill in the art, at the time the invention was made to incorporate this feature to provide Madnick's system with more variety of databases choice.

Regarding **claim 18**, Madnick et al. disclose the method of claim 16 except wherein the metadata comprises a collection of data source objects which reflect treatment of data stored in each respective database as a single object and wherein each of said data source objects is broken down into successive class levels. Nevertheless, Nierenberg et al. teach the above claim limitation in fig. 4 and col. 10, lines 35 – 55). Therefore, it would have been obvious for one ordinary skill in the art, at the time the invention was made to apply Nierenberg et al's teaching of the level break objects such objects 142, and 144 include such information as details about the entity above the level break and summaries of the report information presented for that entity to Madnick et al's system in order to generate a report design with the aid of graphical user interface having user interface tools with allow users to visually generate the layout of a report and search or retrieve distributed data over internet system.

Regarding **claim 19**, Madnick et al. did not clearly disclose the method as recites in claim 18 wherein said class levels include a class comprising a System Node, System Server, Data Source Object, Field Desc and System Script. Nevertheless, Nierenberg et al. teach the above claim limitation in fig. 4, col. 10, lines 35 – 65, and col. 2, lines 15 – 60). Therefore, it would have been obvious for one of ordinary skill in the art, at the time the invention was made, to

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incorporate Nierenberg et al.'s teaching to Madnick et al. to include such information as details about the entity above the level break and summaries of the report information presented for that entity (col. 10, lines 47 – 50).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilian Vo whose telephone number is (703) 305-7864.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Lilian Vo
Examiner
Art Unit 2127

lv
October 2, 2003


MAJID A. BANANKHAH
PRIMARY EXAMINER